THE LEADER IN LONG RANGE BUSINESS CLASS WIRELESS DATA

EMP9605H

High Speed, High Output RF Power 802.11 b/g/n 2.4GHz 2T2R Mini PCI Module

EMP9605H is a mini-PCI type IIIA 802.11n radio module with up to 28dBm high output power that provides ultra long-range wireless networking in 2.4GHz radio operation and supports up to 300Mpbs data rate. The shrinking dimension and light weight can easily be integrated into wide range embedded systems.

Features

BEST RECEIVE SENSITIVITY LEVEL IN ITS CLASS

-95dBm@6Mbps
-80dBm@54Mbps
-94dBm@MCS0/MCS8
-76dBm@MCS7/MCS15

ADVANCED POWER CONSUMPTION MANAGEMENT

Effectively reduce the total power consumption on the platform up to 3.3V, but also support External DC 5V power for high power transmission.

RADIO OPERATION

IEEE 802.11 b/g/n

DATA RATES

Up to 300Mbps

ANTENNA ARCHITECTURE

2x2 MIMO Operation

MMCX ANTENNA CONNECTOR

Two MMCX connectors

SPECIFICATIONS

Hardware Specifications			
Standard	WECA(WiFi & WiFi5 Compliance), IEEE802.11b/g/n, RoHS		
Chipset	Atheros AR9220		
Physical Interface	32-bit Mini-PCI Type III A, 2 x MMCX Connector		
Power Requirements	Advanced Power Consumption Management Jump Wire ON : External DC power in supported, Voltage=5V Jump Wire OFF : Only Support DC Power from Mini-PCI Slot=3.3V		
Current Consumption Information	Tx Current Consumption (without jump wire)	Continuous Tx@802.11a	<2A
		Continuous Tx@802.11n	<2A
	Rx Current Consumption	Continuous Rx	<450mA
	Card on Current	Data Communicating with AP	<450mA
	Sleep Current	Sleep Mode	<100mA
Frequency Band	802.11b/g/n 2.412GHz ~ 2.472GHz		
Data rate	Up to 300Mbps		
Receive Sensitivity (Typical)	802.11n (2.4GHz)	802.11g	802.11b
	-94dBm @ MCS0/MCS7 -76dBm @ MCS8/MCS15	-95dBm @ 6Mbps -79dBm @ 54Mbps	-97dBm@1Mbps -90dBm@11Mbps
Available transmit power (5V)	802.11n (2.4GHz)	802.11g	802.11b
	27dBm @ MCS0~2/MCS8~10 23dBm @ MCS5/MCS13 26dBm @ MCS3/MCS11 22dBm @ MCS6/MCS14 24dBm @ MCS4/MCS12 21dBm @ MCS7/MCS15	26dBm @ 6~24Mbps 23dBm @ 48Mbps 25dBm @ 36Mbps 21dBm @ 54Mbps	28dBm@1~11Mbps
Available transmit power (3.3V)	802.11n (2.4GHz)	802.11g	802.11b
	25dBm @ MCS0~2/MCS8~10 21dBm @ MCS5/MCS13 24dBm @ MCS3/MCS11 20dBm @ MCS6/MCS14 22dBm @ MCS4/MCS12 19dBm @ MCS7/MCS15	24dBm @ 6~24Mbps 21dBm @ 48Mbps 23dBm @ 36Mbps 19dBm @ 54Mbps	26dBm@1~11Mbps
Software Specifications			
Security	WPA, WPA2, 64/128 bits WEP, TKIP and AES Hardware base IEEE 802.11i encryption engine		
Environment & Physical			
Temperature Range	-30°C to 80°C (-22°F to 176°F)		
Humidity (non-condensing)	0%~95% typical		
Dimensions	66mm (L) x 59.5mm (W) x 5mm (H)		
Weight	16g		

* Theoretical wireless signal rate based on IEEE standard of 802.11 b, g, n chipset used.
Actual throughputmay vary. Network conditions and environmental factors lower actual throughput rate.
** All specifications are subject to change without notice.

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